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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/028,153
Filing Date: December 20, 2001
Appellant(s): WATSON ET AL.

MAILED

FEB 01 2007

Technology Center 2600

Mr. Scott C. Hatfield
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10 November 2006 appealing from the Office action
mailed 28 June 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct. No amendments have been presented after the final rejection.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,766,526	ELLIS	7-2004
WO 99/60790	ELLIS	11-1999
6,438,110	RAI et al	8-2002
6,889,385	RAKIB et al	5-2005
6,016,307	KAPLAN et al	1-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 2, 6-11, 14-16, 19, and 22-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis (US Pat No. 6,766,526 B1), in view of Ellis (WO 99/60790 A1), and in further view of Rai et al. (US Pat No. 6,438,110).

In consideration of claims 1, 16, and 19, the Ellis ('526) reference discloses a "system" further comprising a "computer readable medium" so as to implement a "method for content transmission network selection in a system coupled in parallel through both of a broadcast network and a broadband network" [20] to a "viewer location" [22] wherein the "broadcast network and the broadband network are different" (Figures 1 and 12; Col 3, Line 10 – Col 29; Col 10, Line 13-43). The reference, however, is silent with respect to particular features corresponding to the ordering of video programming to be subsequently delivered.

In an analogous art pertaining to systems and methods for content transmission, the Ellis ('790) reference discloses a video-on-demand distribution system. As illustrated in Figure 2, the system comprises a "processor" [29] or video server implicitly comprising a "memory having stored therein computer executable instructions" so as to control and coordinate the routing and delivery of selected programming to the requestor's location (Page 11, Lines 7-19). The method by which programming is delivered comprises "identifying video program content to be transmitted based on at least one transmission request" (Page 22, Line 18 – Page 23, Line 16) whereupon the system necessarily selects a network [32] for "transmission of the video programming content to the viewer location (Page 23, Line 17 – Page 24, Line 10). The system subsequently "transmits the video programming content on the... network" [32] to the "viewer location" [30] (Page 2, Lines 3-16; Page 11, Lines 7-19; Page 25, Lines 28-32). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify the parallel transmission path video distribution network and reception network using the teachings of Ellis ('790) so as to "identify video programming content to be transmitted to the viewer location based on a transmission request . . . transmit[ting] the video programming content to the viewer location based upon characteristics of the transmission request comprising a future time at which the video programming content is requested to be viewed . . . based at least in part on an option of delivering the video programming content either at a time that the request is received or at the future time" the purpose of providing a means to further provide a program guide system with improved capabilities for viewing and selecting television programs (Ellis ('790): Page 3, Lines 22-30).

While the “characteristics of the transmission request compris[e] a future time at which the video programming content is requested to be viewed . . [and] at least in part on an option of delivering the video programming content either at a time that the request is received” (ex. start/view now) or “at the future time”, it is unclear if the “selecting one of the broadcast network or a broadband network” necessarily takes time of transmission into account in association with its routing decisions so as to actively make a decision or choice between which network to route the data (Ellis ('790): Col 11, Lines 7-19). In an analogous art pertaining to systems and methods for content transmission, the Rai et al. reference discloses actively making routing decisions or “selecting one of [a] broadcast network or [a] broadband network for transmission” based upon the schedule time for a requested transmission (Rai et al.: Figures 2-3; Col 5, Lines 48-61; Col 6, Line 30 – Col 7, Line 6; Col 7, Line 35 – Col 8, Line 11). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined Ellis references to “select one of the broadcast network or the broadband network for transmission of the video programming content to the viewer location based upon characteristics of the transmission request comprising a future time at which the video programming content is requested to be viewed, the selection based at least in part on an option of delivering the video programming content either at a time that the request is received or at the future time; and transmitting the video programming content on the selected one of the broadcast network or the broadband network to the viewer location coupled to both of the broadcast and broadband networks” for the purpose of providing a means by which to advantageously manage and allocate resources in a communication network comprising a plurality of links or

“networks” for scheduled events in order to ensure the high-quality delivery of services (Rai et al.: Col 1, Line 34 – Col 2, Line 6).

Claim 2 is rejected wherein the “step of identifying content to be transmitted based on at least one transmission request comprises transmitting a list of available content items over the broadband network” and “receiving from a broadband network requests for content items” in connection with ordering the requested video-programs (Ellis ('790): Page 13, Line 7 – Page 14, Line 4).

Claims 6 and 7 are rejected wherein the “broadcast network comprises one of a direct to home satellite network, a terrestrial wireless network, and a cable network” and the “broadband network comprises one of a digital subscriber line network and a cable network” (Ellis ('526): Col 3, Lines 34-58).

Claim 8 is rejected wherein “said characteristics of the transmission request further comprise at least one of . . . a dollar amount the viewer is willing to pay for the content” (Ellis ('790): Page 23, Lines 3-16; Page 24, Lines 4-10).

In consideration of claims 9-11 and 22-24, the Rai et al. reference discloses making a determination so as to utilize a “broadcast network or a broadband network based upon characteristics of the transmission request comprising a future time” and “at least one of the . . . characteristics of the content to be transmitted . . . “wherein the “characteristics of the content to be transmitted comprise at least one of . . . duration of the content” (Rai et al.: Figures 2-3; Col 5, Lines 48-61; Col 6, Line 30 – Col 7, Line 6; Col 7, Line 35 – Col 8, Line 11).

In consideration of claims 14 and 15, the Ellis ('790) reference discloses that the "step of transmitting the content on one of the broadcast network . . . comprises transmitting the content on one of the broadcast network . . . at a time prior to the future time at which the content is requested to be viewed" and comprises "transmitting the content on one of the broadcast network . . . at the future time at which the content is requested to be viewed" (Page 24, Lines 4-10). For example, a requested video program may be partially sent prior to the start time at which point the remaining portion of the video program must be sent at the requested future time in order to enable the viewer to watch the entire presentation.

Claims 25, 27, and 29 are rejected in view of the combined references for the implicit scenario wherein the user of the Ellis ('790) submits a "first transmission request" for a "first programming content" (ex. "The Truman show") and at a later point in time submits a "second transmission request" for a "second video content" (ex. "X-Files The Movie"). The combined Ellis references provide heterogeneous distribution network comprising both a "broadcast" and a "broadband network". The Rai et al. reference discloses that the particular selection of a particular network including both "broadcast" and a "broadband networks" wherein the particular selection between networks depends on the scheduled time of the request. Taken in combination, the Rai et al. reference teaches that the particular scheduling of video programming occurs using either of the "broadband" or "broadcast networks" of the combined Ellis references in order to optimally deliver resources using the available networks. Accordingly, the claimed subject matter "wherein the video programming content comprises first video programming content, wherein the transmission request comprises a first transmission request, and wherein selecting one of the broadcast

network or the broadband network comprises selecting the broadcast network . . . further comprises identifying second video programming content to be transmitted based on a second transmission request wherein the first and second transmission requests are different; selecting the broadband network for transmission of the second video programming content based upon characteristics of the second transmission request comprising a second future time at which the second video programming content is requested to be viewed, the selection of the broadband network being based at least in part on an option of delivering the second video programming content either at a time that the second request is received or at the future time; and transmitting the second video programming content on the broadband network” is considered met.

Claims 26, 28, and 30 are rejected in light of the aforementioned wherein the “transmitting the first video programming content on the broadcast network comprises transmitting the first video content on the broadcast network without using the internet” and “transmitting the second video programming content on the broadband network comprises transmitting the second video programming content on the broadband network including the Internet” (Ellis ('526): Col 3, Lines 46-58).

2. Claims 12, 13, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis (US Pat No. 6,766,526 B1), in view of Ellis (WO 99/60790 A1), in view of Rai et al. (US Pat No. 6,438,110), and in further view of Rakib et al. (US Pat No. 6,889,385 B1).

In consideration of claims 12, 13, 18, and 21, it is unclear if the combined references necessarily “transmit over a broadcast network a notification of the transmission characteristics . . . [comprising] an identification of a transmission network”. In an

analogous art pertaining to content transmission, the Rakib et al. reference discloses “transmitting over a broadcast network a notification of the transmission characteristics . . . [comprising] an identification of a transmission network” (Figures 9A-E). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify the combined references so as to further transmit an identification of a transmission network for the purpose of advantageously providing a means to both manage bandwidth across heterogeneous networks and to further provide a means for informing a requesting a subscriber how to particularly receive the requested video-on-demand programming.

3. Claims 3-5, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis (US Pat No. 6,766,526 B1), in view of Ellis (WO 99/60790 A1), in view of Rai et al. (US Pat No. 6,438,110), and in further view of Kaplan et al. (US Pat No. 6,016,307).

In consideration of claims 3-5, 17 and 20, the Rai et al. reference in conjunction with determining which network to utilize for content distribution “determines whether there is sufficient available bandwidth in the broadcast network; and if there is not sufficient available bandwidth in the broadcast network . . . determines to transmit the content over a broadband network”. The step of “determining whether there is sufficient available bandwidth in the broadcast network to transmit the content comprises the steps of determining the available bandwidth in the broadcast network, determining the minimum transfer rate for the content; determining whether the minimum transfer rate of the content exceeds the available bandwidth in the broadcast network” wherein “if the minimum transfer rate for the content exceeds the available bandwidth in the broadcast network, then

determining that there is not sufficient available bandwidth in the broadcast network to transmit the content and if the minimum transfer rate for the content does not exceed the available bandwidth in the broadcast network, then determining that there is sufficient available bandwidth in the broadcast network to transmit the content" (Rai et al.: Figure 11; Col 7, Lines 48-65).

In connection with the determination of which network link to utilize, the Rai et al. reference is silent with respect to the concept of transmission costs being used in conjunction with routing decisions. In an analogous art pertaining to content transmission, the Kaplan et al. reference teaches discloses the particular usage transmission costs in addition to other factors should be utilized in connection with making routing decisions between various networks. In particular, the Kaplan et al. reference discloses that the particular decision as to which network to utilize may be based on a number of factors. These factors include "determining available bandwidth" and a comparison between the "cost of transmitting content" between a "broadband" or "broadcast network" whereupon should the "cost of transmitting the content" over one network not exceed the other then the less expensive network is selected all other factors being equal (Kaplan et al.: Col 1, Line 18-27; Col 3, Line 59 – Col 4, Line 12). The determination of the "cost of transmitting the content" on the basis of "determining a cost of transmission per unit of data", "determining the total number of units of data in the content" and subsequently calculating the "product of the total number of units of data in the content and cost of transmission per unit of data" of one network versus another in order to determine "if the product . . [or total cost of transmission] of data over the broadcast network exceeds the product . . [or total cost of transmission] of data

over the broadband network" (Kaplan et al.: Col 4, Line 12 – Col 7, Line 44). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made so as to modify the Rai et al. routing algorithm with the cost analysis teachings of Kaplan et al. for the purpose of advantageously utilizing a plurality of parameters in addition to cost in order to arrive at the optimal routing of data through a network (Kaplan et al.: Col 1, Line 61 – Col 2, Line 15).

(10) Response to Argument

In response to appellant's arguments, the examiner respectfully disagrees that the rejection should be reversed. Only those arguments raised by the appellant pursuant to the particular issues on appeal have been considered and addressed by the examiner. Any further arguments regarding particular limitations not specifically argued or other reasoning regarding deficiencies in a *prima facie* case of obviousness that the appellant could have made are considered as having been conceded by the appellant for the basis of the decision of this appeal and are not being subsequently addressed by the examiner for the Board's consideration. Should the panel find that the examiner's position/arguments or any aspect of the rejection is not sufficiently clear or a particular issue is of need of further explanation, it is respectfully requested that the case be remanded to the examiner for further explanation prior to the rendering of a decision.¹

A. Independent claims 1, 16, and 19 are not patentable over the cited art

Regarding the rejection of claims 1, 16, and 19, appellants argue that the combined references fail to teach or suggest the limitation of “selecting one of the broadcast network or the broadband network . . . the selection based at least in part on an option of delivering the video programming content either at a time that the request is received or at the future time” and that it would not be obvious to utilize the teachings of Rai with the Ellis system (Page 10, Para. 1-3). The Panel should not find these arguments persuasive.

Regarding appellants arguments regarding the particular step of selecting, to summarize the rejection initially relies upon Ellis ('526) to illustrate a system architecture in which a television distribution facility [16] is interconnected to the user television equipment [22] via a plurality of networks [20] (Figure 1) comprising parallel ‘broadband’ (ex. [20 c]) and ‘broadcast networks’ (ex. [20 a/b]) (Figure 12). As noted, the Ellis ('590) reference is silent with respect to ordering of video programming. The analogous Ellis ('790) reference similarly discloses a video distribution network that may comprise a number of networks [32] (Col 14, Lines 24-26). As illustrated in Figure 8 of Ellis ('790), the particular ‘delivery’ of video programming is “based at least in part on an option of delivering the video programming content either at a time that the request is received or at the future time” wherein the particular “transmission of the video programming content to the viewer location [is] based upon characteristics of the transmission request comprising a future time at which the video programming content is requested to be viewed” (Page 23, Lines 3 – Page 24, Line 10). Therefore, taken in combination, the references provide for the particular delivery of video programming either immediately or at a future time using either the ‘broadcast’ or

¹ See 37 CFR 41.50(a)(1) and MPEP 1211

‘broadband network’. One of these networks is necessarily utilized or ‘selected’ in order to distribute the requested programming or else the subscriber would be unable to receive and watch the requested video programming. The Rai reference was relied upon as further evidence to support intelligent ‘selection’, as set forth in the specification, between multiple networks when dealing with future delivery of the requested video programming.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which appellant relies (i.e., that the ‘selection’ is based upon an option of delivering the programming content at a time that the request is received) is not required in the rejected claim(s). As an initial point so as to alleviate any confusion that might arise, it is respectfully noted that the particular language of the ‘selection step’ is worded sort of backwards in so far as illustrated in Figure 2 of the application the particular ‘option’ [212] of when to provide a particular video programming is presented prior to the actual ‘selection’ [218]. The language of the claim requires that the actual ‘selection’ is based only on the 2nd option of delivering the video programming content at the future time and does not require selection based upon the alternative 1st option of delivering the video programming content at a time that the request is received. While the user may be provided with an option to choose either immediate or future delivery (though it's unclear that the immediate delivery option need even be provided given the alternative ‘either’ language), the claim requires that the ‘selection’ is actually being made only according to option for future delivery (as opposed to immediate delivery) since the ‘transmission request comprises a future time at which the video programming content is requested to be viewed’ (ex. a request for immediate delivery clearly would not include the

future time as opposed to the time that the request is received). As conceded by appellant, the Rai reference clearly teaches the aspect of network ‘selection’ based upon a future time or ‘allocating reservations for a network connection in advance’. Therefore, Rai in combination with the combined Ellis teachings meets the claimed limitations as further supported by appellant’s arguments as to the teachings of Rai.

Assuming arguendo that a showing also need actually be made for the alternative of Rai performing the ‘selection’ based on delivering the video at a time that the request is received, Rai, while focusing on advanced scheduling of resources, still supports reservation scheduling for ‘at the time the request is made’ or immediately. In particular, Rai teaches that the constraint parameters for scheduling include ‘immediate delivery’ as the minimum constraint in the form of a real-time moving look ahead window (ex. now + 24 hours) (Col 10, Lines 51-58). Figure 19 (entitled Scheduled Services) further illustrates that the minimum scheduled start time for a service includes ‘immediate delivery’ (start time = 0 hours) (Col 16, Line 63 – Col 17, Line 29). Accordingly, assuming arguendo that a showing is required, Rai does in fact support the ability to perform the claimed network ‘selection . . . [based on] a time that the request is received”.

Regarding appellants arguments that it would not be obvious to utilize the teachings of Rai with the Ellis system (Page 10, Para. 1-3), appellants apparently conclude that it simply would not have been obvious to combine aspects of the computer network of Rai with the television systems of Ellis.² The examiner respectfully disagrees. The examiner recognizes

² The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, not only are the teachings of Rai applicable to the Ellis television distribution system since the television distribution system is a 'computer network' in at least one embodiment, but the Rai reference also provides an explicit motivation to one having ordinary skill in the art to utilize its teachings in the manner presented in the rejection of record.

Ellis ('526) discloses both 'broadcast' (ex. 20 a/b) and 'broadband' (ex. 20 c) networks (Figure 12) and in regards to the system, Ellis ('526) teaches that:

Communication paths 20 may be any suitable type of link suitable for supporting television programming and data. (Col 3, Lines 38-39)

And

Communications paths 20 may include, for example a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, an Internet link, a digital subscriber line (DSL) link, a combination of such links, or any other suitable communications link. (Col 3, Lines 54-57)

And

... [T]he present invention may be implemented using user television equipment 22 that is based on a personal computer, a WebTV box, a personal computer television (PC/TV), or handheld computing device, etc. If desired, the system may be implemented using a client-server architecture using user television equipment 22 as a client processor and a computer in the television distribution facility 16 as a server. (Col 4, Lines 3-13). (emphasis added)

Ellis ('526), therefore, teaches that the television system may be implemented using any suitable combination of communication links including those which interconnect a plurality of computers so as to form a 'computer network' comprising a plurality of links consisting of a 'broadcast' and a 'broadband' network (Figure 12; Col 3, Lines 34-58).

Appellants argue that the teachings of Rai et al. are directed to a 'computer network' comprising a number of link elements (associated with different types of networks).³ As previously noted, Ellis ('526) describes a 'computer network' that comprises multiple links (Figure 12). Rai teaches that it is desirable to schedule and allocate data traffic across multiple network links within a 'computer network' in order to avoid network congestion and data corruption associated with scheduling delivery of resources (Col 1, Line 66 – Col 2, Line 2). As explained in the rejection of record, one having ordinary skill in the art would have been sufficiently motivated to modify the analogous 'computer network' of the combined Ellis references using 'computer network' teachings of Rai in manner suggested in order to ensure the high-quality delivery of services by avoiding network congestion and data corruption. The Panel clearly should not find appellant's arguments persuasive with respect to combining aspects of the computer network of Rai with the television systems of Ellis.

B. Dependent claims 25, 27, and 29 are not patentable over the cited art

Regarding the rejection of claims 25, 27, and 29, appellant initially points out what the claim recites and then relies on the arguments presented in association with the independent

³ Rai teaches that it is not limited to any particular network arrangement (Col 5, Lines 57-61) and further contemplates that the particular 'links' may be associated with both 'broadband' and 'broadcast' networks (Col 1, Lines 17-22; Col 5, Lines 44-57).

claims including substantially repeating previously presented arguments that it would not have been obvious to one having ordinary skill in the art so as to utilize the teachings of Rai in association with the combined teachings of Ellis et al.⁴ These previously presented arguments should similarly be found unpersuasive.

Ellis ('526) clearly illustrates the existence of different 'broadcast' (ex. 20 a or 20 b) and 'broadband' (ex. 20 c) networks (Figure 12). Ellis ('526) also teaches that the television system may be implemented as a form of 'computer network' comprising a plurality of links (Figure 12; Col 3, Lines 34-58). As argued, Rai et al. discloses a 'computer network' comprising a number of link elements (also associated with different networks) and Rai teaches that it is desirable to schedule and allocate data traffic across multiple network links within a 'computer network' in order to avoid network congestion and data corruption (Col 1, Line 66 – Col 2, Line 2). Accordingly, one having ordinary skill in the art would have been sufficiently motivated to modify the 'computer network' of combined Ellis references using the 'computer network' teachings of Rai in order to ensure the high-quality delivery of services by avoiding network congestion and data corruption.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

⁴ A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. See 37 CFR 41.37(c)(vii)

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

SEB

January 23, 2007

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